

# Atigaru Point No. 1 Well Plugging – 2009

## Operations Summary

BLM initiated well plugging operations in the Atigaru Point well area on April 7, 2009 under contract to Marsh Creek Environmental Services. The following legacy well was plugged to surface before the cessation of plugging operations on April 21, 2008:

## Atigaru Point Well No. 1

The well was drilled in 1977 on Federal NPRA lands at Atigaru Point on the Beaufort Sea coast as part of the USGS exploration efforts in the National Petroleum Reserve - Alaska. Due to its close proximity to the Beaufort Sea coast and prevailing winds, significant shoreline erosion had advanced into the well location requiring the BLM to complete plugging and abandonment of the wellbore and well site. The well was left suspended and plugged back to 2,255 feet with diesel left in the wellbore. The USGS had been actively using the well for permafrost temperature measurements prior to 2009. Diesel fuel inside the wellbore had been used as a non-freezing medium to aid in conducting the temperature measurements. During well plugging operations, approximately 14,400 gallons of diesel fuel was displaced with NaCl (salt) saturated water prior to completing final plugging operations. The NaCl water was then evacuated from the casing down to a depth of 125 feet below ground level (BGL) and an inflatable plug was run and set at this depth using nitrogen pressure from the surface. Cement was mixed at 15.8 ppg and dumped on top of the plug filling the casing to within 15 feet of the surface. The frozen earth around the wellhead was excavated down to 19 feet BGL, the wellhead was cut off 18 feet BGL, an identification plate was welded onto the cut off casing, and the excavated hole was backfilled with clean dirt to four feet about ground level.

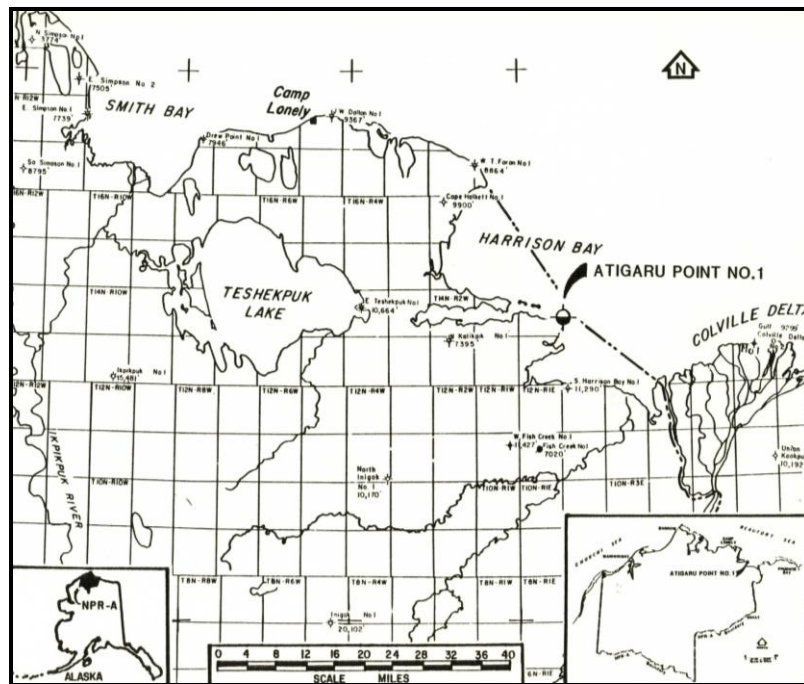
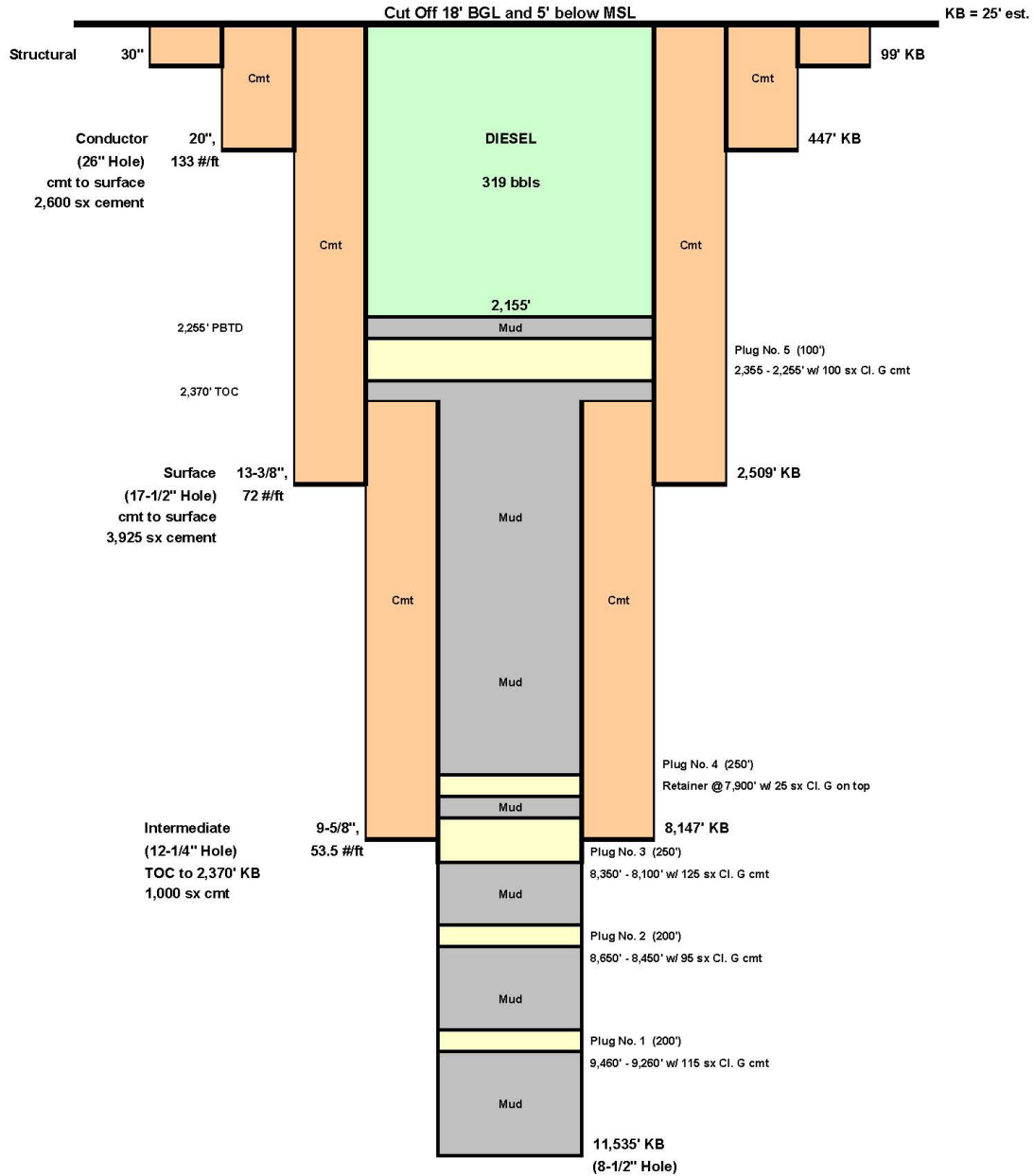


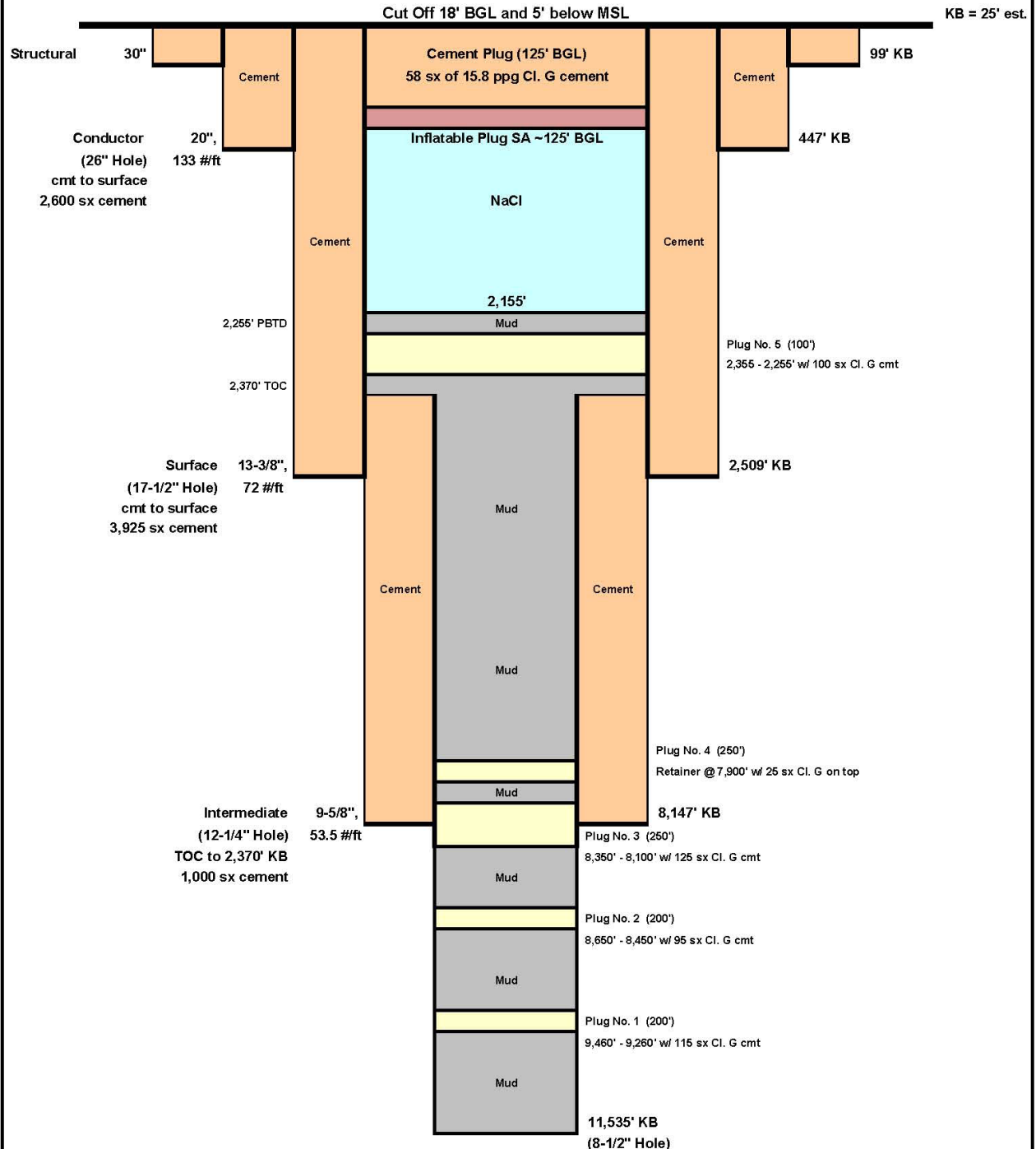
Figure 1: Map of Atigaru Point No. 1 Well Location

**Atigaru Point No. 1**  
**National Petroleum Reserve - Alaska**  
**Wellbore Configuration After TA**  
**Well Schematic**  
**API #: 50-103-20008-00-00**  
**APTD #: 100-104**



**Figure 2: Atigaru Point No. 1 Well Configuration – July 2008 Status**

**Atigaru Point No. 1**  
**National Petroleum Reserve - Alaska**  
**Final P&A Configuration**  
**Well Schematic**  
**API #: 50-103-20008-00-00**  
**APTD #: 100-104**

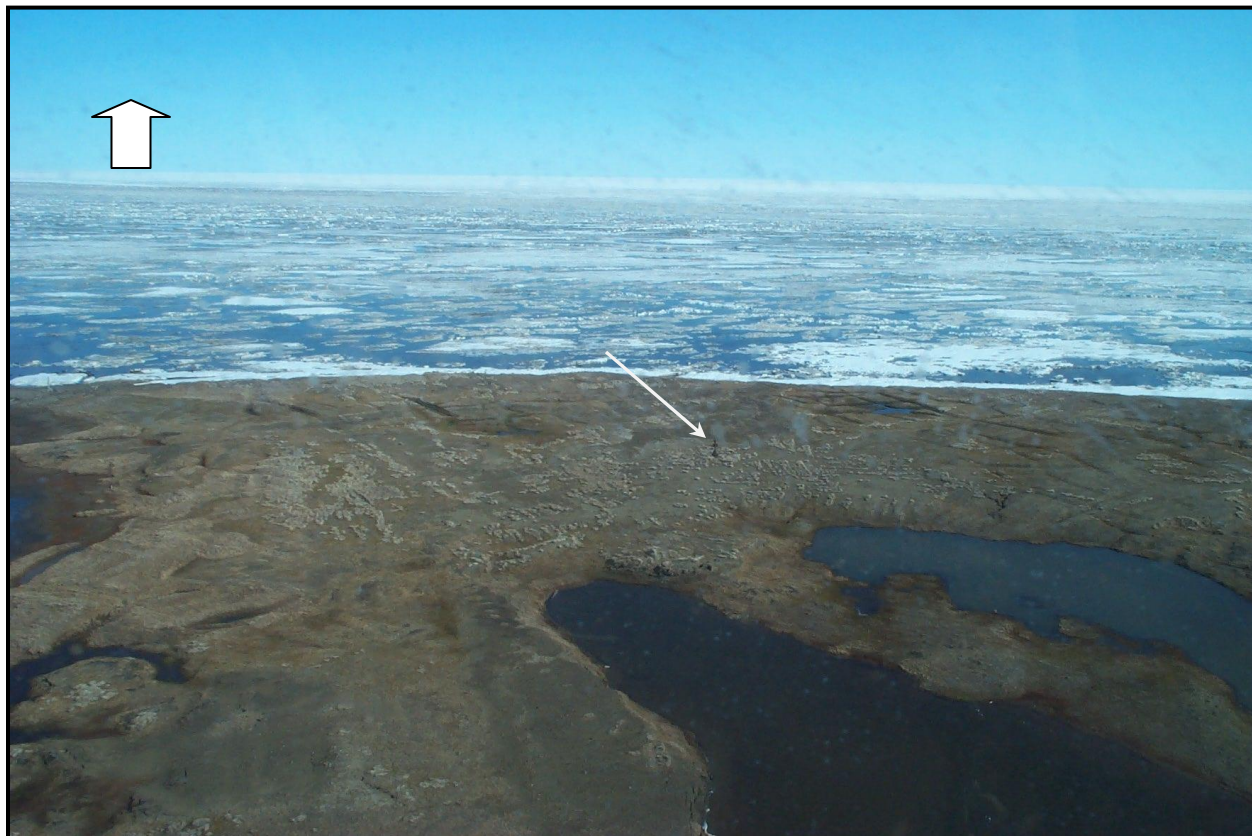


**Figure 3: Atigaru Point No. 1 Well – FINAL P&A Configuration**



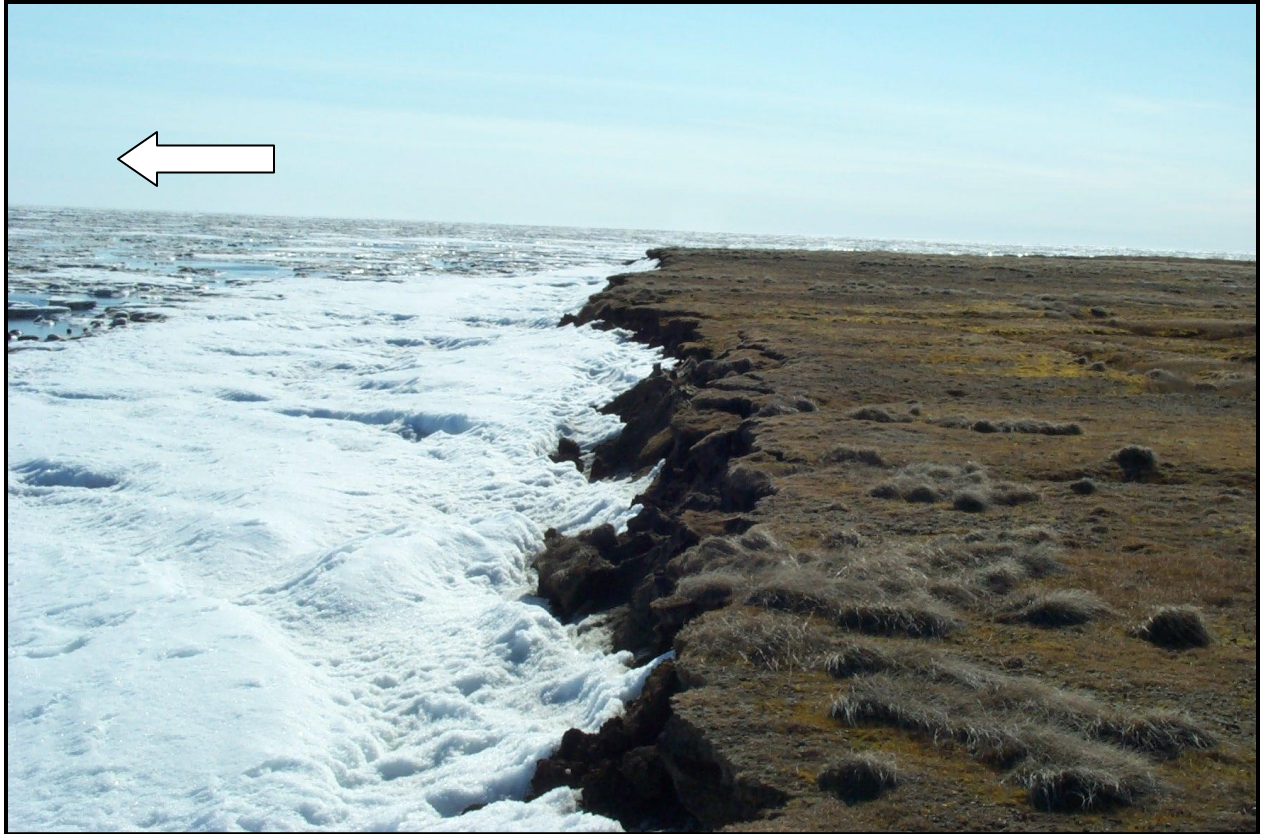


**Figure 4: Atigaru Point No. 1 wellhead – July 2005 – Facing Southeast**



**Figure 5: North facing - Atigaru Point well location – July**





**Figure 6: Coastal erosion on Beaufort Sea – July 2005 – Facing East**



**Figure 7: Wellhead at location – April 2009 – Facing South**



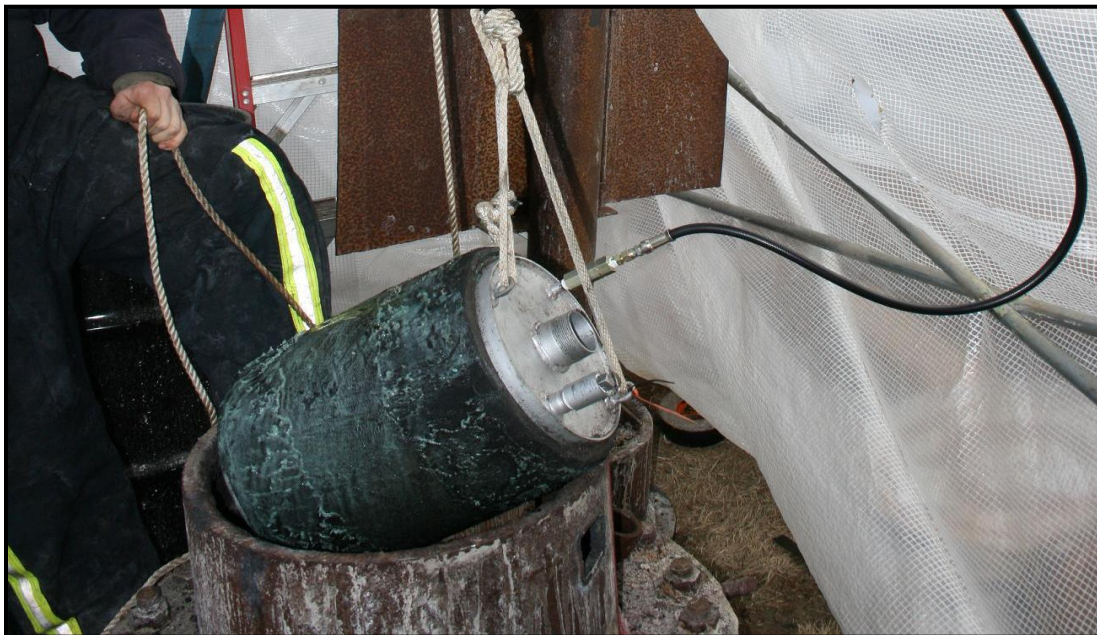


Figure 8: Displacing diesel with NaCl water - April 2009





**Figure 9: Wellhead cut off after diesel displaced with NaCl water - April 2009**



**Figure 10: Preparing to lower and set inflatable plug - April 2009**





**Figure 11: Wellhead after cementing and before excavation - April 2009**



**Figure 12: Excavation of wellhead cellar – April 2009**





**Figure 13: Excavation to depth of 10 feet BGL – April 2009**





**Figure 14: Cutting off first wellhead section at 8 feet BGL – April 2009**





**Figure 15: First cut off at 8 feet BGL – April 2009**





**Figure 16: Final excavation to 19 feet BGL – April 2009**





**Figure 17: Final wellhead cut off at 18 feet BGL – April 2009**



**Figure 18: Wellhead ID marker plate installed – April 2009**



**Figure 19: Final well surface location after backfilling cellar – April 2009**